584

United States Department of Agriculture

Economic Research Service

Agriculture Information Bulletin Number 584

December 1989

Changes in U.S. Agriculture and Emerging Issues for Legislation in the 1990's

Kathryn L. Lipton

In This Report. *Policymakers debating the 1990 farm legislation face a number of important domestic issues. Annual costs of Federal farm programs could remain high, despite moves toward more market-oriented policies in the 1985 legislation. The goal of a more market-responsive farm sector will likely be reflected in provisions to increase program flexibility and ameliorate program inequities. A number of issues beyond traditional commodity policy could be addressed, including food safety and alternative agriculture.*

The current omnibus farm legislation is scheduled to expire in late 1990. Policymakers are now debating the future direction of U.S. agricultural policies and programs.The 1985 Food Security Act provides a 5-year framework for the Secretary of Agriculture to administer various agriculture and food programs. Based on a complicated, half-century-old network of former and existing legislation, the act helped the U.S. farm sector become more responsive to domestic and foreign markets. At the same time, U.S. agricultural exports have increased, farm income has reached record levels, and the farm financial situation has brightened considerably.

With U.S. agriculture now on a more positive tack, a major rewrite of the 1985 Food Security Act is not expected. However, some important issues will doubtless be intensely debated, including environmental policy, food safety, and options for alternative agriculture. Hanging over all the considerations and limiting any major new farm spending programs is the need to reduce the Federal deficit.

Changes in U.S. Agriculture:

- Number of farms has fallen from 5.4 million in 1950 to about 2.2 million in 1988.
- Average farm size has increased from over 200 acres in 1950 to 460 acres in 1988.
- Large farms (with sales of $200,000 or more) accounted for 62 percent of sales in 1987, up from 23 percent in 1960.
- Purchased farm inputs have grown sharply since the 1940's, along with borrowed capital and interest payments.
- Farm debt as a percentage of assets peaked in the mid-1980's, but now has begun to fall.
- Exports rose from $7.3 billion in 1970 to a peak of over $43 billion in 1980, but declined to $26.2 billion by 1986.

Emerging Issues:

- Need for Congress to reduce domestic spending.
- More flexibility in commodity programs to permit farmers to respond to market signals.
- Address market imbalances caused by relationships of target prices for several crops.
- Reduce incentives to produce for government-financed storage, such as Commodity Credit Corporation (CCC) stocks, rather than the market.
- Balance shift to market orientation with efforts to negotiate international trade reform.
- Continue expansion of export markets.
- New kinds and uses of crops.
- Environmental concerns such as erosion, ground water, and agricultural chemicals.
- Food safety.

A 1.75:

READEX best copy available

Number of Farms Continues to Decline; Average Farm Size Increases

The number of farms dropped from 6.5 million in the 1930's to 2.2 million in 1988. The average size of the remaining farms has increased, and thus the amount of land in farming remains close to the mid-1930's level.

Farming was once the livelihood of more than 75 percent of the U.S. work force, but now claims only about 2 percent. Farming's share of the gross national product (GNP), almost 60 percent in the early 1800's, was 1.5 percent in 1988. Farming remains important to the economy, however, because of its links to a variety of industries. Farmers buy agricultural inputs, such as equipment, supplies, feed, seed, fertilizer, labor, and financing, from "upstream" industries, which account for another 2 percent of GNP. Farmers, in turn, sell their products to the "downstream" sectors, those that store, process, transport, manufacture, distribute, retail, consume, and export farm products. These industries account for 13 percent of GNP.

The number of farms fell from a peak of 6.5 million in the mid-1930's to 2.2 million in 1988 (fig. 1). However, the amount of land devoted to farming and ranching remains close to the mid-1930's level of about 1 billion acres because average farm size has more than doubled. New technologies have enabled these fewer, but larger, farms to increase production faster than the needs of the domestic population.

Total agricultural production is more than 2.75 times the level of 1930. The productivity of land is more than 2.5 times that of 1930, and breeding animals are 2.25 times more productive. Output per farmworker has risen nearly sixfold since 1950, reducing the number of farmworkers needed.

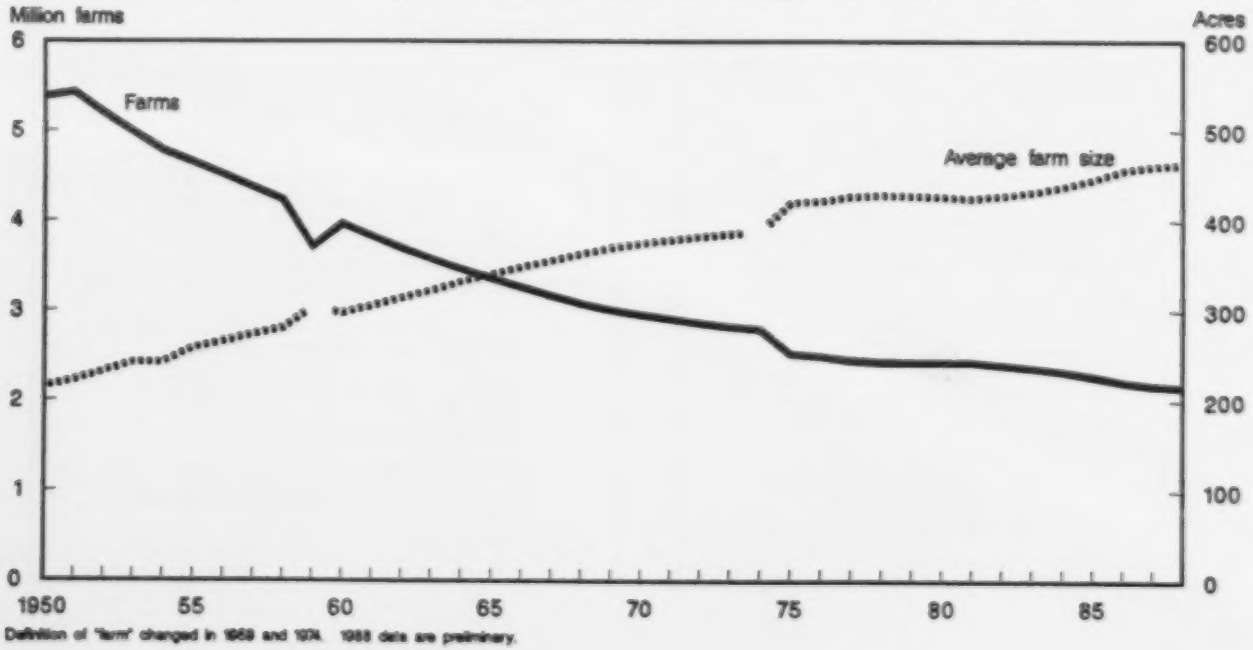
Mechanization, the expansion of the Nation's agriculture to the more productive lands of the Midwest, shifts among crops, and improvements in farm management, pest control, and cropping techniques have boosted agricultural productivity while total input use has remained nearly the same as in 1930.

The mix of land, labor, and capital, however, has changed substantially. Fertilizer consumption in 1985 was 12.8 times higher than in 1930, feed concentrates 2.3 times higher, tractor horsepower 12 times greater, and tractor numbers 5 times greater.

Figure 1

Number of farms and average farm size

The number of farms has been declining while the average size of remaining farms has been increasing.



Definition of "farm" changed in 1969 and 1974. 1988 data are preliminary.

Waning Importance of Small Farms

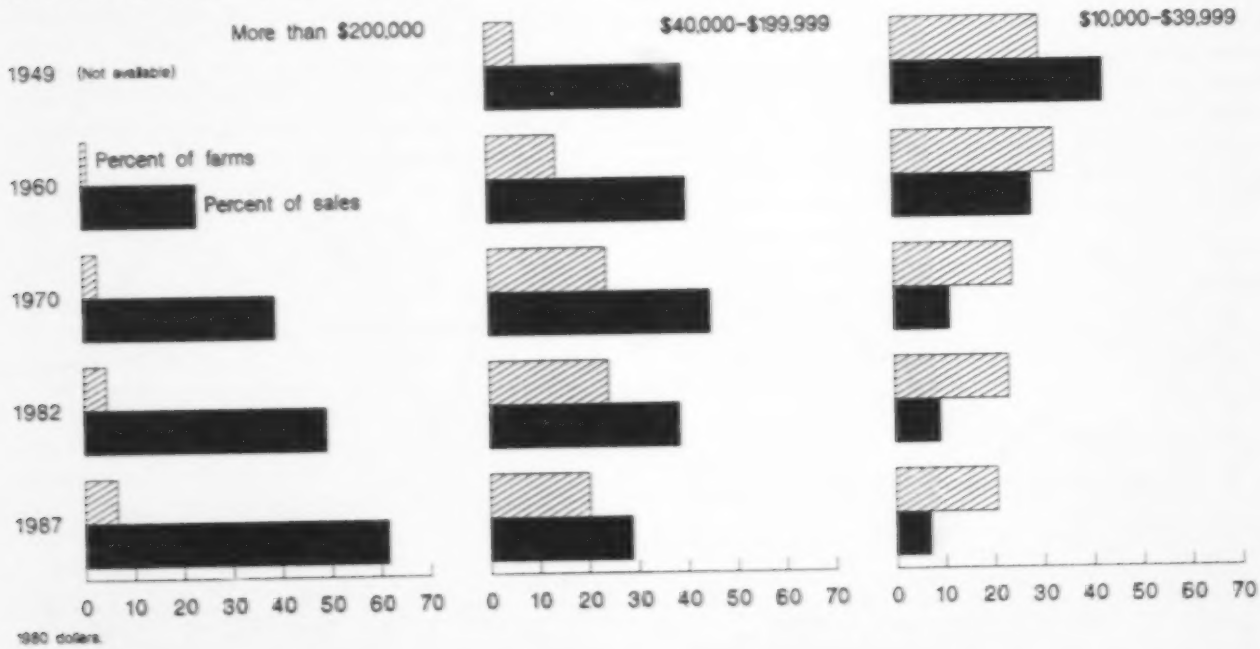
Small farms made up a larger share (21 percent) of farms in 1987, but large farms accounted for a greater share (62 percent) of total sales.

Agriculture has become more capital intensive with the increased use of sophisticated machinery and other technology. The use of equipment such as large, four-wheel-drive tractors, electronically controlled harvesters, and computers means the optimal (least-cost) farm size has risen as sizable capital outlays are spread over larger outputs to achieve lower costs. Large farms (those with annual sales of $200,000 or more in 1980 dollars) more than doubled in number between 1960 and 1987, while small farms (those with annual sales of $10,000-$39,999) fell from 1.2 million to 447,000. These small farms made up 21 percent of all farms in 1987, but produced less than 7 percent of the total value of farm products sold. These farms made up 32.5 percent of all farms and 28 percent of sales in 1960 (fig. 2). Large farms, on the other hand, accounted for 6.5 percent of all farms in 1987, but almost 62 percent of total sales. These large farms had a 23-percent share of sales in 1960.

Figure 2

Distribution of farms and sales by sales class

The number of small farms and their share of sales declined from 1960 to 1987 in comparison with large farms.



General Economy Affects Farm Sector

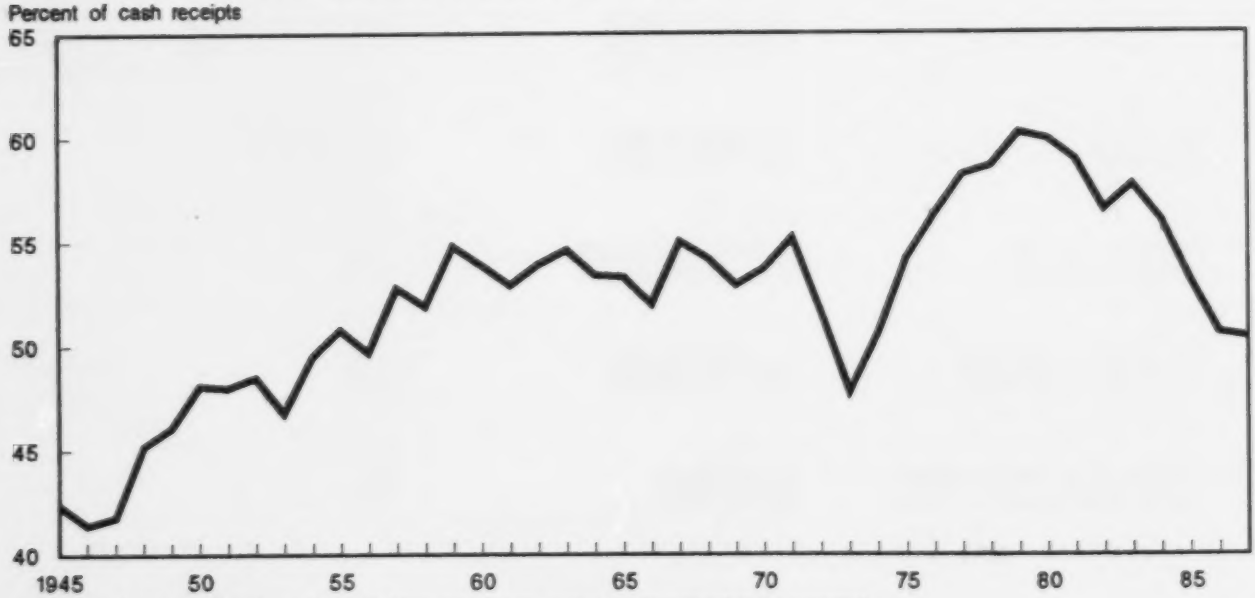
Increased use of financed inputs has made farmers more vulnerable to changes in the general economy. Interest expenses account for almost 13 percent of production costs.

Greater reliance on machinery, fertilizers and other chemicals, and hybrid and other improved seeds; larger farm size; and increasing specialization mean that most farm inputs are purchased (fig. 3). Because more of this needed capital is financed, farmers are increasingly affected by developments in the general economy that determine the availability of loan funds and the level of interest rates. Greater use of borrowed capital, higher land prices, larger mortgages, and higher interest rates have meant steady increases in interest expenses since the 1940's. Total interest charges peaked at $21.8 million in 1982 when rates were highest. Despite a decline to $15.5 million in 1987, short-term and real estate interest still account for approximately 13 percent of farm production expenses.

Intensive use of purchased inputs has also increased agriculture's vulnerability to rising costs and interruptions in supplies. Prime examples include the oil shortage and price increases of 1974 and 1979 and the runup in real interest rates (interest rates higher than inflation) in the early 1980's.

Figure 3
Purchased inputs used in farming

More than half of the farm sector's cash receipts go for purchases of inputs.



Inputs exclude farm household purchases, but include intermediate products, services, and hired labor (including perquisites).
Cash receipts include CCC loans and government payments.

Trade Links U.S. Agriculture and World Economies

U.S. agricultural exports rose steadily throughout the 1970's to a record in 1981. The trend reversed in the early 1980's as a worldwide recession and debt crisis dampened foreign demand. U.S. farm exports began to rebound in 1987.

Macroeconomic factors, such as the interest rate and rate of inflation, have become critical in shaping demand for farm products. Yet, agricultural policies are only weakly integrated with macroeconomic policy. Instead, farm policies are typically developed in response to events within the farm production sector and their success is measured by indicators such as farm income, commodity prices, and number of farms in financial difficulty. These reactive farm policies generally focus on adjusting commodity price and income supports.

Trade and financial links mean that domestic and foreign macroeconomic policies and world supply and demand conditions affect U.S. agricultural exports, which, in turn, affect the farm sector. Increased foreign consumption in the 1970's stimulated unprecedented growth in the world market for agricultural imports, particularly those produced in the United States. Strong foreign demand pushed export volume and commodity prices to all-time highs early in that decade. Annual growth rates in U.S. agricultural exports jumped from 4 percent in the 1950's and 1960's to more than 10 percent in the 1970's. The value of exports increased nearly sixfold during the 1970's, and volume more than doubled (fig. 4). Boosted by strong exports in 1973, real net farm income (gross farm income minus total expenses, adjusted for inflation) reached its highest level since World War II.

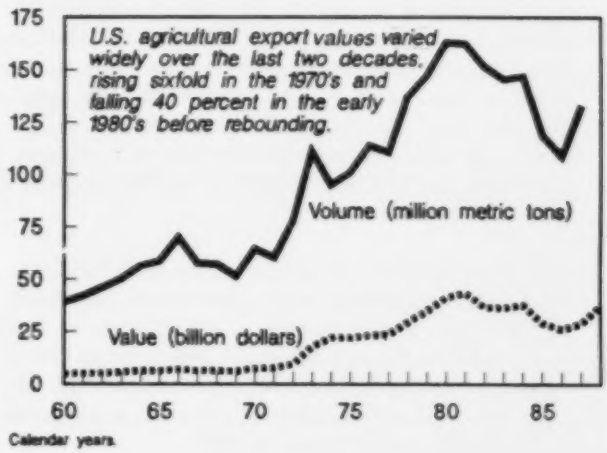
The factors expanding trade and bringing boom times to agriculture in the 1970's reversed in the 1980's. Foreign production grew in response to the higher prices of the 1970's. Foreign per capita consumption rose at less than two-thirds the pace of the 1970's, due in large part to a worldwide recession induced by monetary policy adjustments designed to slow inflation. High real interest rates and the appreciating international value of the U.S. dollar contributed to a debt crisis in developing countries that stifled import demand. Many countries limited or reversed their growing dependence on imports. While world trade stagnated over the first half of the 1980's, U.S. farm exports fared even worse, dropping by a third from the 1981 high.

U.S. agricultural exports began to rebound after the value fell almost 40 percent between 1981 and 1986. The volume of U.S. agricultural exports grew about 26 percent in 1986-88. The U.S. share of world agricultural exports climbed from 12 percent in 1986 to 16 percent in 1988, back in line with the long-term average. Exports totaled $37.1 billion in 1988, up from $26.2 billion in 1986.

Most of the export rebound came from increased volume resulting from improved U.S. competitiveness, a drop in support prices mandated by the Food Security Act of 1985 coupled with the lower valued dollar, and increased use of the Export Enhancement Program (EEP) that raised U.S. wheat and coarse grain exports. The EEP, authorized by the Food Security Act of 1985, helps U.S. exporters meet competitors' prices in subsidized markets. Exporters are awarded bonus certificates, which are redeemable for CCC-owned commodities, enabling them to sell certain commodities to specified countries at prices below those of the U.S. market.

ERS analysts estimate that each dollar received from agricultural exports in 1987 stimulated another $1.65 of output in the U.S. economy. The supporting activity required to produce agricultural exports generated an additional $47.2 billion: $7.2 billion from the farm sector, $3.7 billion from the food processing sector, and $15.2 billion from other manufacturing sectors. The trade and transportation sector gained $5.8 billion in economic activity from agricultural exports, and other services gained $15.3 billion. Nonfarm sectors of the economy received about 85 percent of the additional economic activity.

Figure 4
Value and volume of agricultural exports



Financial Conditions in the Sector Improve

U.S. agriculture faced a financial crisis in the mid-1980's, with roughly 4 percent of farms technically insolvent. Since 1986, gains in land values and higher net income have improved the farm financial picture.

Financial conditions in the farm sector have improved since the debt crisis of the mid-1980's. The roots of the financial crisis can be traced back nearly a decade. An optimistic outlook for exports and a high inflation rate encouraged vigorous investment by farmers in the late 1970's. Land prices were bid up rapidly as farmers sought to expand. Many farmers who financed land and machinery investments found they could rely on further borrowing against rapidly rising equity values to meet cash-flow needs. With over half the returns on farm investment coming from capital gains, the strategy appeared sound.

However, farm asset values fell more than a fourth between 1981 and 1986, led by depressed commodity prices, deflated expectations of farmland appreciation, and sudden increases in real interest rates prompted by monetary policy changes designed to reduce inflation. The decline in land values after 1981 left little cushion for debt-burdened farmers since land accounted for about 70 percent of farm assets. Rising real interest rates increased the cost of borrowing to finance debt, financially squeezing many farmers.

Signs of improvement in the farm economy first began to appear in 1986. Current returns to assets—annual income as a percentage of asset value—rose to 3 percent in 1986, compared with 1.9 percent in 1980-84. Farmland values, which fell about 12 percent in both 1984 and 1985, dropped around 8 percent in 1986.

A gain in farmland values in 1987 helped reverse the 31-percent drop in farm assets between the 1981 peak and 1986. The rise in farm asset values reflects higher expected returns from current operations and government programs. At the same time, higher net incomes have helped farmers to reduce or pay off existing debt and have provided some with enough capital to avoid debt financing. Total farm debt continued its 4-year decline, putting the farm sector in the best position at any time in the 1980's to meet debt service obligations (principal and interest).

Cash receipts from marketings fell between 1985 and 1987, but were offset by rising government payments and falling production expenses. Lower costs for energy and other manufactured inputs and reduced interest expenses led the decline in production expenses. Net cash farm income (cash income minus cash expenses) reached a record $57 billion in 1987.

The debt-to-asset ratio, which compares the amount of money owed to creditors with that invested by the farm operator, is one indicator of a farm's long-term financial strength. Debt soared in the 1970's, but with rapidly rising asset values, the ratio remained relatively stable. The picture changed after 1981, however, as declining asset values caused the ratio to rise (fig. 5).

Over 21 percent of the farms included in USDA's Farm Costs and Returns Survey (FCRS) were highly leveraged in 1985, meaning that debts exceeded 40 percent of assets. These heavily indebted farms owed two-thirds of all farm operator debt. By 1987, slightly less than 15 percent of the sample farms in the FCRS were highly leveraged. The share of farm operator debt owed by these farms fell to just over half of the total.

The financial position of farms varies by size, type, and location. Over 3 percent of farms with $100,000 or more in sales, for example, were technically insolvent on January 1, 1988, versus just over 1 percent with sales under $40,000. Almost 8 percent of farms with $100,000 or more in sales were insolvent in 1986, but less than 2 percent with sales under $40,000. Only 16 percent of the largest farms (over $500,000 in gross sales) had no year-end debt in 1987, compared with nearly 50 percent of the smallest farms (less than $100,000 in gross sales). Forty-four percent of the FCRS sample farms ended 1987 without any outstanding debt, compared with about 40 percent of farms in 1985 and 1986.

Debt-to-asset ratios fell for all production specialties in 1987, except nursery or greenhouse operations. Cash grain, other crop, and dairy farms had the highest percentage of operations, with debt-to-asset ratios exceeding 70 percent. The Northern Plains, Lake States, Corn Belt, and Delta States appear to have the largest proportion of highly leveraged farms.

Considerable variability in net farm income (gross farm income minus total expenses) over the last two decades has contributed to financial instability in the farm sector. Alternating years of drought and recordbreaking export demand, for example, sent net farm income to a record high of $34.4 billion in 1973. Drought, large program-induced acreage cutbacks, record declines in inventories, high costs, and lower prices pushed net farm income down to about $13 bil-

lion by 1983. Net farm income has increased substantially since then as cash expenses have fallen and government payments have risen.

Nominal net farm income totaled $46.3 billion in 1987, with direct Federal payments accounting for $16.7 billion. These payments plus another $12.2 billion in net CCC loans enabled more farmers to meet cash commitments out of current income than in previous years. About a third of all farms with debt-to-asset ratios above 70 percent had negative net farm income in 1987, compared with almost half in 1986.

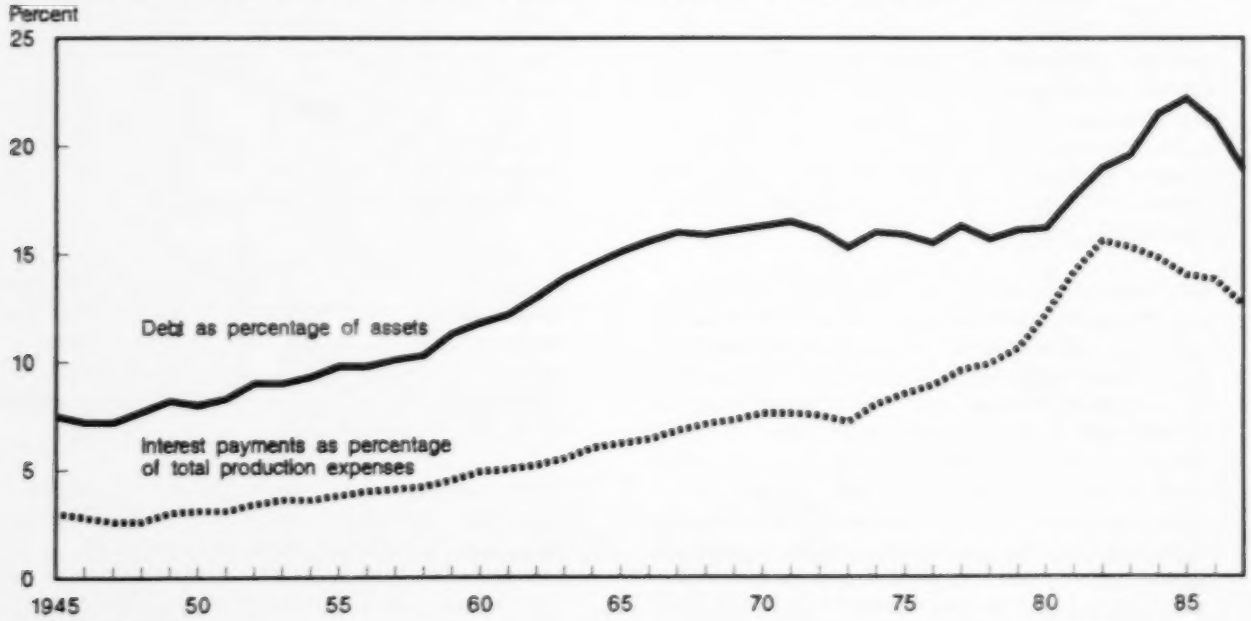
Federal payments based on production volume have skewed the distribution of direct program benefits. The 294,000 farms with annual sales of more than $100,000 received almost 68 percent of government farm payments and accounted for just over 35 percent of farms reporting payments. About 11 percent of Federal payments went to the more than 1.1 million farms with annual sales of less than $40,000. These small farms, which accounted for almost 38 percent of those reporting payments, received average annual benefits of about $3,800 in 1987 because they accounted for only 8 percent of major program commodity sales. In contrast, farms with $500,000 or more in sales received an average of $68,705 per reporting farm. The average payment for all farms totaled $18,017.

Examining the data by acreage operated clearly reveals the direct link between production and government payments. Farms with 501 acres or more accounted for about 75 percent of major program commodity sales in 1987 and received 72 percent of total payments. These farms made up about 19 percent of all farms and about 40 percent of those receiving government payments.

Figure 8

Borrowed capital in farming

Increases in farmland values in 1987 helped reverse the rising debt-to-asset ratio of the early 1980's.



1987 data are preliminary.

Challenges in Designing U.S. Agricultural Policy

Policymakers face several critical issues in designing farm policy for the 1990's, including balancing domestic policy goals against efforts to obtain major agricultural trade reforms. The Food Security Act of 1985 has helped guide U.S. agriculture toward a market orientation by lowering loan rates and changing target prices.

The events of the 1970's and 1980's have demonstrated the instability that can plague the farm sector. This instability is likely to increase in the years ahead because stronger economic links between countries mean that general economic contractions or expansions strongly affect an export-oriented U.S. agriculture.

The potential for continued volatility has significant implications for farm policy, pointing to the need for more flexible farm programs to deal with different markets in the United States and abroad. Policymakers face several critical challenges in designing these programs. The current negotiations of the General Agreement on Tariffs and Trade (GATT) are of major importance to the United States with its export-dependent agriculture. The trend to protectionism has disrupted world export markets by encouraging production, reducing trade, and leading to dumping of surpluses. Recognizing that domestic policies have international implications, U.S. political leaders are including the full range of agricultural subsidies as key items in the Uruguay Round of the GATT negotiations. The challenge for U.S. policymakers is to design farm price, production, and marketing policies that meet domestic goals and objectives, and that are also compatible with efforts to obtain major agricultural trade reforms worldwide.

Fundamental changes in the structure of agriculture over the last 20 years will have implications for farm policy, too. Millions of modest-sized family farms, one focus of farm assistance programs, have disappeared. Technological advances and other changes in the sector have helped create a dichotomy within U.S. agriculture: (1) the large, commercial operations and (2) the small- to medium-sized farms, many operators of which have turned to off-farm employment to supplement their incomes. As farmers continue to leave the sector, policymakers face difficult choices between programs and policies that maintain the current structure of the industry and those that ease the transition of exit caused by technology, changing markets, and macroeconomic links.

Current program instruments enhance farm income by supporting commodity prices or providing direct payments. Price and income support benefits are based on production volume, which skews the distribution of benefits to the large-volume producers. Furthermore, commodity program benefits accrue only to those farms growing supported commodities—roughly a quarter of all farms.

Federal programs explicitly link production and income, so policymakers face a dilemma: how to equitably achieve the dual goals of income support and a market-responsive farming sector. The present policy that ties benefits to production affects mostly a minority of larger farms. One alternative is to link benefits more closely with income needs. The likelihood of reduced benefits under such a program, however, would mean less participation by the larger, more efficient farms. Therefore, linking benefits to income needs may not adjust production enough to hold down Federal budget outlays under the current program structure.

The Food Security Act of 1985 took significant steps to reduce land in production by implementing programs such as the Conservation Reserve Program (CRP). Producers who participate in the CRP sign contracts agreeing to convert highly erodible cropland to approved conservation uses for 10 years. Participating producers receive annual rental payments and cash or payments-in-kind of up to 50 percent of the cost of establishing permanent vegetative cover.

About 45 million acres were idled under government programs in 1986, an amount similar to the 1950's and 1960's. More than 57 million acres were idled in 1989. Implementation of the CRP, increasing farm productivity, and the slow growth expected for demand could mean that record or near-record levels of land will have to be idled for several years.

Yet, the United States probably cannot reach its full competitive potential if it relies on acreage reduction programs. In addition to wasting a productive resource, these programs make land artificially scarce, pushing land prices above what they would be otherwise, thus raising production costs. Farmers also apply inputs more intensively on land remaining in production, further contributing to higher production costs. Farmers spread overhead and other fixed costs over fewer acres, again raising unit costs of production.

Events of the last decade have defined the importance of links within agriculture and to domestic and interna-

tional economies. Farm policy can neither control all events affecting agriculture nor completely isolate farms from them. Farm policy, for instance, has little influence on macroeconomic conditions, but macroeconomic conditions affect farm production decisions and farm policy.

Agriculture's links to domestic and international economies mean that shifts in farm policy can have repercussions far beyond the farm sector. Raising farm prices, for example, may have minimal effects on domestic consumption but could mean reduced exports as foreign buyers strive for self-sufficiency or find other suppliers who are more price accommodating. Cutting back acreage may help raise farm prices, but input suppliers are then forced to adjust to lower demand.

Profile of the 1985 Food Security Act

The 1985 Food Security Act focuses on shifting agriculture more toward a market orientation so the farm sector can produce for domestic and international markets at prices reflecting global supply and demand. The 1985 act was in many ways a response to conditions created by the 1981 law, which set high and rigid price supports without regard for market conditions. As a result, U.S. farmers had difficulty selling their products overseas when global markets changed. The 1985 Food Security Act has done the following:

- Lowered loan rates, which are the prices per unit (bushel, bale, pound, or hundredweight) at which the government provides loans to farmers to enable them to hold their crops for later sale. Lowered rates make U.S. farm products more price competitive by reducing the likelihood of U.S. Government stock accumulations and its world-price-increasing effects. The 1985 act esentially reduced the protection the loan rate provided to foreign competitors. The wheat loan rate, for example, declined from $3.30 in 1985 to $2.06 in 1989; corn fell from $2.55 to $1.65. Loan rates are tied to an average of past market prices. Furthermore, larger discretionary reductions in loan rates are allowed than in the past if the formula-determined rate is likely to hamper market competitiveness.
- Changed minimum target prices. A target price is a price level established by law for wheat, feed grains, rice, and cotton. Farmers participating in the Federal commodity programs receive the difference between the target price and either the market price or the loan rate, whichever is higher. Previously adjusted each year, target prices were frozen at their 1985 levels, and declined from 1988 through 1990.
- Included provisions to ease the transition to more market-oriented policies. Authorities and mandates for export subsidies, for example, are part of the act. It also continues authority for supply controls in the form of paid land diversions, which offer payments to producers for reduction of planted acres of a program crop, and acreage reduction programs. Reductions in planted acreage are required when stocks are expected to exceed certain levels.
- Addressed the dual goals of supply control and conservation by creating a Conservation Reserve Program (CRP) to gradually withdraw 40-45 million acres from production. The program removes erodible acreage from cropland use and encourages conversion of the land to grass and trees. Over 28 million acres had been enrolled in the CRP by January 1989.

Emerging Issues for the Farm Bill Debate

A number of issues beyond traditional commodity policy will be debated in discussions of the 1990 farm bill, including food safety and alternative agriculture. Overriding many of these issues, however, will be the need to reduce the Federal deficit.

Farm Programs and the Federal Deficit. Budgetary pressures are likely to be a major consideration in many of the agricultural policy proposals Congress will consider for the 1990 farm bill. While Federal outlays for farm programs dropped from the peak of $25.8 billion in fiscal 1986 to $12.5 billion in fiscal 1988, they remain several times the levels of a decade ago.

Strong pressure to cut domestic spending will continue to force lawmakers to scrutinize farm programs. Cost-cutting proposals have included further reductions in target prices, setting target prices to reflect the costs of production, and establishing more flexible acreage bases.

In addition, Congress is expected to address the need to reform the present crop insurance program to avoid further costly drought or natural disaster aid to farmers. Participation in the crop insurance program has been very low. Congress provided assistance to all farmers, not just insured producers, in disaster-afflicted areas in 1988 and 1989. Continued reliance on Federal disaster relief discourages crop insurance purchases and places the burden of assistance on taxpayers.

Commodity Program Flexibility. Budget savings and program flexibility are the central goals of one widely discussed alternative to current farm programs. The "triple-base" or "flexible base" concept initially proposed by Representative Charles Stenholm (R-Texas) would permit farmers to respond to market signals while reducing government spending on farm programs. The plan continues the concepts of a crop base and permitted acreage. The crop acreage base is the average of the wheat, feed grains, cotton, or rice acreage planted for harvest, plus land not planted because of acreage reduction or diversion programs. The permitted acreage is the maximum amount of the crop acreage base which may be planted for harvest.

Under the triple-base plan, a third "payment acreage base" would be established as a percentage of the permitted acreage. The payment acreage would be based on a 5-year average of the amount determined to meet domestic, export, and reserve markets. The difference between the permitted acreage and the payment acreage base could be planted to any other program crop. Similar proposals would allow farmers to plant alternative crops or other program or nonprogram crops. The triple-base plan could achieve budget savings by reducing the amount of acreage eligible for Federal deficiency payments. In addition, supporters of the plan suggest that by "planting for the market" farmers could increase profits on the flexible acreage above what they would have received in deficiency payments.

Market Distortions. Lawmakers are also expected to address market imbalances caused by the relationships of target prices for several crops. The present programs encourage resource allocation toward supported crops and away from those with less support or nonsupported crops. Corn production, for example, has increased at the expense of soybeans and oats. Such distortions have affected U.S. competitiveness in some international markets, such as soybeans, and, in the case of oats, have led to inadequate domestic supplies.

Distortions caused by current programs also will likely focus debate on stock policies. While the farmer-owned reserve and CCC stocks have helped moderate the effects of production variability, the programs often have encouraged farmers to produce for government-financed storage rather than the market. Lawmakers will probably reexamine reserve and CCC inventory policies to determine how large stocks should be, how they should be financed, and how their release to the market can be encouraged when supplies tighten.

Domestic Policy and Trade. In designing agricultural policies, Congress is expected to balance budget concerns and the shift to more market-oriented U.S. agricultural policies with the need to maintain or enhance U.S. leverage during the current round of GATT talks. Raising the loan rate, for example, would lower Federal spending for farm programs, but could also weaken the U.S. negotiating position by reducing competitiveness.

The new farm bill is likely to continue efforts to increase U.S. farm exports with targeted subsidies. Such aggressive trade policies, however, would have to be amended if the Uruguay Round of GATT negotiations is successful in reducing trade distortions.

New Agricultural Crops and Products. Members of Congress have introduced a number of bills to fund development of new industrial and commercial products from plants and other agricultural materials,

recognizing that new sources of demand for farm products may help U.S. agriculture overcome the effects of stagnant domestic demand and increased foreign competition. These products include corn-based plastics and newsprint from kenaf, an annual nonwood fiber crop. Congressional observers suggest that these agricultural research proposals are likely to be incorporated into proposed farm bill legislation.

The development of new agricultural crops and products has been promoted to stimulate economic growth in rural areas. Recognizing, however, that rural areas can no longer rely completely on agriculture, several proposals have been offered aimed at diversifying the economies of rural communities and promoting rural businesses.

The Environment. Environmental issues are expected to receive considerable attention in the 1990 farm bill debate. Legislation has been proposed to expand the CRP to 60 million acres, providing an early indication that lawmakers are likely to examine the progress and cost of the program. The CRP reduces soil losses by an estimated 300 million tons per year compared with the early 1980's, but at an annual cost of $1.4 billion in 1988.

The CRP has fallen short of its goal of planting 12.5 percent of program acreage in trees, suggesting that Congress will take a closer look at these provisions. Provisions to include flood and water control and wildlife habitats in the program may also be discussed. Tight supplies following the 1988 drought also suggest the need to investigate other ways to achieve similar conservation goals.

Conservation. Current Federal programs that attempt to bolster farm income through price supports may hamper achievement of conservation goals. Federal payments provide stimulus for farmers to produce because they are paid on a per-bushel or unit basis. The result has been large surpluses and greater use of pesticides and other chemicals to boost output. Proposals to separate payments from production have been offered in recent years. Farmers would make planting decisions based on market prices under the "decoupling" concept, but receive income-support payments independent of production and marketing decisions.

Ground water, in particular, is likely to be a key conservation issue. Congress failed to include provisions dealing with agricultural pollution of ground water in the 1988 reauthorization of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The legislation, administered by the Environmental Protection Agency (EPA), requires registration of pesticide products to ensure that they meet stated health, safety, and environmental criteria. Amendments to the law require previously registered pesticides to be reregistered by 1997 to meet updated standards. Under the law, EPA can cancel registration of pesticides not meeting the required criteria, require label changes, or order immediate termination of use.

Alternative Agriculture. As concerns about ground water contamination, chemical use, and the long-term sustainability of agriculture have grown, so has interest in low-input or alternative agriculture. The first Federal funding for the Low-Input Sustainable Agriculture (LISA) Program, administered by USDA, was passed in 1987. The program is designed to support research and educational efforts to help farmers make a profitable transition from heavy dependence on chemical pesticides and fertilizers. Methods include crop rotations and mechanical cultivations to control weeds; integrated pest management strategies such as introducing harmless natural enemies; and application of manures, municipal sludge, and compost for fertilizer.

One proposal would provide cash incentives and tax breaks to encourage farmers to voluntarily review farm chemical use and to cut back where possible. Proponents of low-input agriculture are also calling for a review of current price and income support policies that financially penalize farmers for switching from heavily chemical-dependent practices, such as continuous corn, to crop rotations featuring legumes, small grains, and rye that are not eligible for Federal payments.

Food and Human Health. Several food safety issues have emerged in the 101st Congress, including establishing a seafood inspection program similar to those for meat and poultry. Greater public concern about residues in food will likely fuel the debate on production methods to discourage reliance on agricultural chemicals. Improved identification of contaminants provides new opportunities to control risks in the food supply. However, it also raises questions regarding the costs of eliminating all risk to human health in the food supply, particularly the impact on food quantity, quality, and prices. Discussions of food safety policy, therefore, are likely to focus on finding a balance between the economic costs and benefits of regulation.

Public education will be an important tool in reducing health risks. With adequate information, consumers can choose foods that meet their dietary needs. Efforts are currently underway in Congress to require improved labeling to disclose the cholesterol, sodium, fat, and calorie content of foods.

*U.S.GOVERNMENT PRINTING OFFICE:1989-261-420:20156/ERS

For additional information ...

Contact Kathryn Lipton (202-786-1888), Commodity Economics Division, Economic Research Service, U.S. Department of Agriculture, Room 1237, 1301 New York Avenue, NW, Washington, DC 20005-4788.

It's Easy To Order Another Copy!

Just dial 1-800-999-6779. Toll free.

Ask for *Changes in U.S. Agriculture and Emerging Issues for Legislation in the 1990's (AIB-584).*

The cost is $3.00 per copy. For non-U.S. addresses, add 25 percent (includes Canada). Charge your purchase to your VISA or MasterCard, or we can bill you. Or send a check or purchase order (made payable to ERS-NASS) to:

ERS-NASS
P.O. Box 1608
Rockville, MD 20849-1608.

We'll fill your order by first-class mail.